

## In the Claims

**1. [[]]** (currently amended) A polymerizable composition comprising

- a) an ethylenically unsaturated monomer;
- b) a radical polymerization initiator; and
- c) a hydroxylamine, a nitron or an alkyl N-oxid having a molecular weight of more than 250 g/mol.

**2. (currently amended)** A polymerizable composition ~~according to~~ according to claim 1 wherein the ethylenically unsaturated monomer is selected from the group consisting of ethylene, propylene, n-butylene, i-butylene, styrene, substituted styrene, conjugated dienes, acrolein, vinyl acetate, vinylpyrrolidone, vinylimidazole, maleic anhydride, (alkyl)acrylic acidanhydrides, (alkyl)acrylic acid salts, (alkyl)acrylic esters, (alkyl)acrylonitriles, (alkyl)acrylamides, vinyl halides and vinylidene halides.

**3. (currently amended)** A polymerizable composition according to claim 1 wherein the ethylenically unsaturated monomer is a compound of formula  $\text{CH}_2=\text{C}(\text{R}_a)-(\text{C}=\text{Z})-\text{R}_b$ , wherein Z is O or S;

$\text{R}_a$  is hydrogen or  $\text{C}_1\text{-C}_4$ alkyl;

$\text{R}_b$  is  $\text{NH}_2$ ,  $\text{O}^-(\text{Me}^+)$ , glycidyl, unsubstituted  $\text{C}_1\text{-C}_{18}$ alkoxy,  $\text{C}_2\text{-C}_{100}$ alkoxy interrupted by at least one N and/or O atom, or hydroxy-substituted  $\text{C}_1\text{-C}_{18}$ alkoxy, unsubstituted  $\text{C}_1\text{-C}_{18}$ alkylamino, di( $\text{C}_1\text{-C}_{18}$ alkyl)amino, hydroxy-substituted  $\text{C}_1\text{-C}_{18}$ alkylamino or hydroxy-substituted di( $\text{C}_1\text{-C}_{18}$ alkyl)amino,  $-\text{O}-\text{CH}_2-\text{CH}_2-\text{N}(\text{CH}_3)_2$  or  $-\text{O}-\text{CH}_2-\text{CH}_2-\text{N}^+\text{H}(\text{CH}_3)_2 \text{An}^-$ ;

$\text{An}^-$  is an anion of a monovalent organic or inorganic acid; and

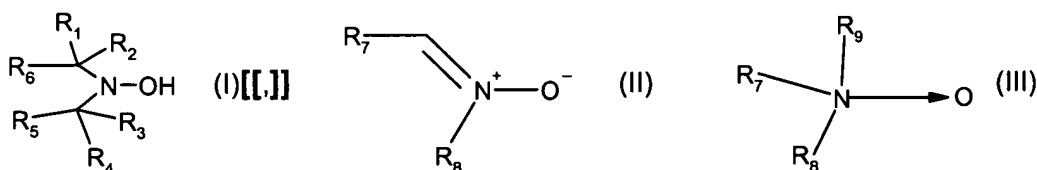
Me is a monovalent metal atom or the ammonium ion.

**4. (original)** A polymerizable composition according to claim 2 wherein the ethylenically unsaturated monomer is styrene, n-butylacrylate, tert-butylacrylate, methylacrylate, ethylacrylate, propylacrylate, hexylacrylate or hydroxyethylacrylate.

5. (original) A polymerizable composition according to claim 1 wherein the radical polymerization initiator is a azo compound, a peroxide, a perester or a hydroperoxide.

6. (original) A polymerizable composition according to claim 5 wherein the radical polymerization initiator is a azo compound or a peroxide.

7. (currently amended) A polymerizable composition according to claim 1 wherein in component c) the hydroxylamine, the nitron or the alkyl N-oxid having a molecular weight of more than 250 are of formulae (I), (II) or (III)



where

R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub> and R<sub>4</sub> are independently hydrogen, phenyl or C<sub>1</sub>-C<sub>4</sub>alkyl;

R<sub>5</sub> and R<sub>6</sub> are independently C<sub>7</sub>-C<sub>35</sub>alkyl, C<sub>7</sub>-C<sub>35</sub>alkenyl or C<sub>7</sub>-C<sub>35</sub>alkinyl, which may be unsubstituted or substituted by phenyl, halogen, NH<sub>2</sub>, N(R<sub>21</sub>)<sub>2</sub>, -OH, -CN, -NO<sub>2</sub>, or -COOR<sub>21</sub>; or which may be interrupted by -O- or -C(O)-;

R<sub>5</sub> and R<sub>6</sub> together are an alkylene bridge, which may be interrupted by a -O-, -C(O)- or a -N(C<sub>1</sub>-C<sub>18</sub>alkyl)- group to form a heterocyclic 5, 6, 7 or 8 membered ring, which may be further substituted by a -O-C(O)-]<sub>n</sub>R<sub>20</sub>, NR<sub>21</sub>-C(O)-]<sub>n</sub>R<sub>20</sub> or a ketal group;

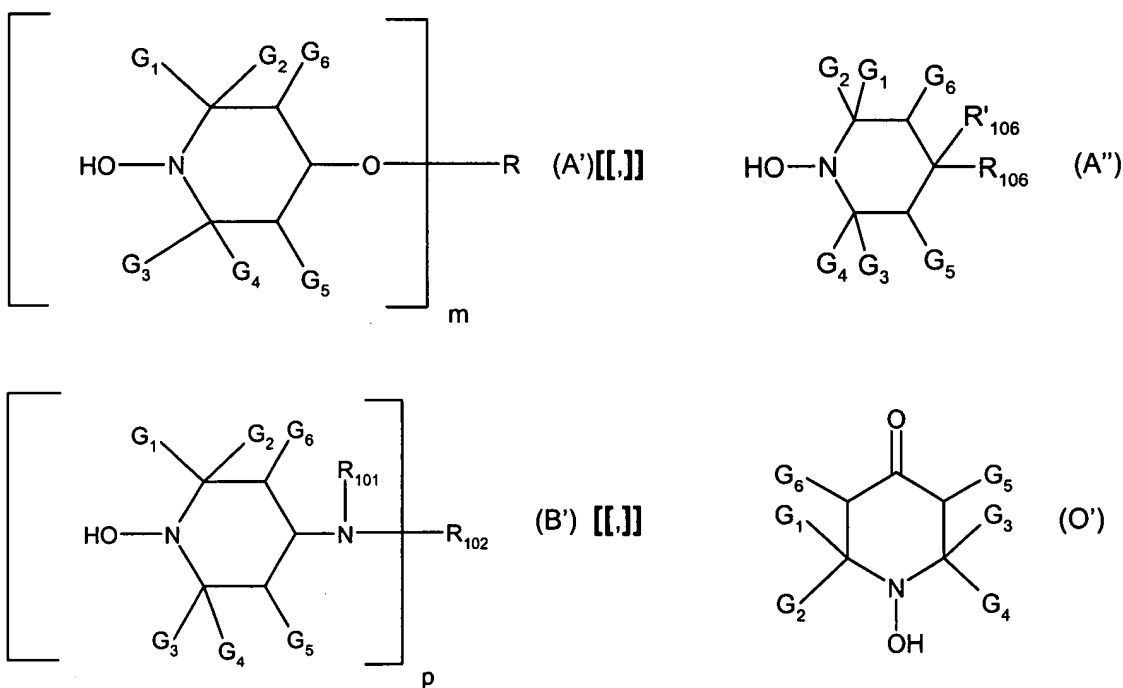
n is 1 or 2; wherein, when n is 1, R<sub>20</sub> is hydrogen or C<sub>1</sub>-C<sub>18</sub>alkyl and, when n is 2, R<sub>20</sub> is C<sub>1</sub>-C<sub>18</sub>alkylene; R<sub>21</sub> is hydrogen or C<sub>1</sub>-C<sub>18</sub>alkyl;

R<sub>7</sub> and R<sub>8</sub> are independently C<sub>8</sub>-C<sub>36</sub>alkyl; and

R<sub>9</sub> is C<sub>1</sub>-C<sub>4</sub>alkyl.

8. (original) A polymerizable composition according to claim 7 wherein the hydroxylamine is of formula (I).

9. (currently amended) A polymerizable composition according to claim 7 wherein the compound of formula (I) is of formula A', A'', B' or O'



wherein

m is 1,

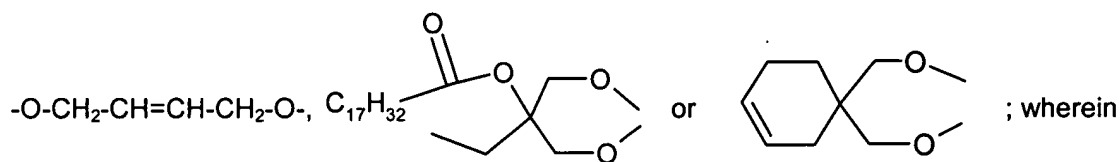
R is hydrogen, C<sub>1</sub>-C<sub>18</sub>alkyl which is uninterrupted or interrupted by one or more oxygen atoms, cyanoethyl, benzoyl, glycidyl, a monovalent radical of an aliphatic carboxylic acid having 2 to 18 carbon atoms, of a cycloaliphatic carboxylic acid having 7 to 15 carbon atoms, or an α,β-unsaturated carboxylic acid having 3 to 5 carbon atoms or of an aromatic carboxylic acid having 7 to 15 carbon atoms;

p is 1;

R<sub>101</sub> is C<sub>1</sub>-C<sub>12</sub>alkyl, C<sub>5</sub>-C<sub>7</sub>cycloalkyl, C<sub>7</sub>-C<sub>8</sub>aralkyl, C<sub>2</sub>-C<sub>18</sub>alkanoyl, C<sub>3</sub>-C<sub>5</sub>alkenoyl or benzoyl;

R<sub>102</sub> is C<sub>1</sub>-C<sub>18</sub>alkyl, C<sub>5</sub>-C<sub>7</sub>cycloalkyl, C<sub>2</sub>-C<sub>8</sub>alkenyl unsubstituted or substituted by a cyano, carbonyl or carbamide group, or is glycidyl, a group of the formula -CH<sub>2</sub>CH(OH)-Z or of the formula -CO-Z or -CONH-Z wherein Z is hydrogen, methyl or phenyl;

$R_{106}$  and  $R'_{106}$  together are both hydrogen, a group  $=O$  or  $=N-O-R_{120}$  wherein  $R_{120}$  is H, straight or branched  $C_1$ - $C_{18}$ alkyl,  $C_3$ - $C_{18}$ alkenyl or  $C_3$ - $C_{18}$ alkinyl, which may be unsubstituted or substituted[[.]] by one or more OH,  $C_1$ - $C_8$ alkoxy, carboxy[[.]] or  $C_1$ - $C_8$ alkoxycarbonyl; or is  $C_5$ - $C_{12}$ cycloalkyl or  $C_5$ - $C_{12}$ cycloalkenyl; or is phenyl,  $C_7$ - $C_9$ phenylalkyl or naphthyl which may be unsubstituted or substituted by one or more  $C_1$ - $C_8$ alkyl, halogen, OH,  $C_1$ - $C_8$ alkoxy, carboxy[[.]] or  $C_1$ - $C_8$ alkoxycarbonyl; or is  $-C(O)-C_1$ - $C_{36}$ alkyl, or an acyl moiety of a  $\alpha,\beta$ -unsaturated carboxylic acid having 3 to 5 carbon atoms or of an aromatic carboxylic acid having 7 to 15 carbon atoms; or is  $-SO_3^-Q^+$ ,  $-PO(O^-Q^+)_2$ ,  $-P(O)(OR_2)_2$ ,  $-SO_2-R_2$ ,  $-CO-NH-R_2$ ,  $-CONH_2$ ,  $COOR_2$ , or  $Si(Me)_3$ , wherein  $Q^+$  is  $H^+$ , ammonium or an alkali metal cation; or  $R_{106}$  and  $R'_{106}$  are independently  $-O-C_1$ - $C_{12}$ alkyl,  $-O-C_3$ - $C_{12}$ alkenyl,  $-O-C_3$ - $C_{12}$ alkinyl,  $-O-C_5$ - $C_8$ cycloalkyl,  $-O$ -phenyl,  $-O$ -naphthyl[[.]] or  $-O-C_7$ - $C_9$ phenylalkyl; or  $R_{106}$  and  $R'_{106}$  together form one of the bivalent groups  $-O-C(R_{121})(R_{122})-CH(R_{123})-O-$ ,  $-O-CH(R_{121})-CH(R_{122})-C(R_{122})(R_{123})-O-$ ,  $-O-CH(R_{122})-CH_2-C(R_{121})(R_{123})-O-$ ,  $-O-CH_2-C(R_{121})(R_{122})-CH(R_{123})-O-$ ,  $-O$ -o-phenylene- $O-$ ,  $-O$ -1,2-cyclohexyliden- $O-$ ,



$R_{121}$  is hydrogen,  $C_1$ - $C_{12}$ alkyl,  $COOH$ ,  $COO-(C_1-C_{12})$ alkyl or  $CH_2OR_{124}$ ;  
 $R_{122}$  and  $R_{123}$  are independently hydrogen, methyl ethyl,  $COOH$  or  $COO-(C_1-C_{12})$ alkyl;  
 $R_{124}$  is hydrogen,  $C_1$ - $C_{12}$ alkyl, benzyl, or a monovalent acyl residue derived from an aliphatic, cycloaliphatic or aromatic monocarboxylic acid having up to 18 carbon atoms;  
 $G_6$  is hydrogen and  $G_5$  is hydrogen or  $C_1$ - $C_4$ alkyl, and  
 $G_1$ ,  $G_2$ ,  $G_3$  and  $G_4$  are methyl; or  
 $G_1$  and  $G_3$  are methyl and  $G_2$  and  $G_4$  are ethyl or propyl or  $G_1$  and  $G_2$  are methyl and  $G_3$  and  $G_4$  are ethyl or propyl.

**10. (original)** A polymerizable composition according to claim 7 wherein in the hydroxylamine of formula (I)

$R_1$ ,  $R_2$ ,  $R_3$  and  $R_4$  are hydrogen; and

$R_5$  and  $R_6$  independently are  $C_7$ - $C_{35}$ alkyl or  $C_7$ - $C_{35}$ alkenyl.

**11. (original)** A process for preparing an oligomer, a cooligomer, a polymer or a copolymer (block, random or graft) by free radical polymerization of at least one ethylenically unsaturated monomer or oligomer, which comprises (co)polymerizing the monomer or monomers/oligomers in the presence of

b) a free radical initiator and

c) a hydroxylamine, a nitron or an alkyl N-oxid having a molecular weight of more than 250 g/mol.

**12. (currently amended)** A process according to claim 11 wherein the polymer obtained has a polydispersity of between 1.1 and 2.5.

**13. (currently amended)** A process according to claim 11 wherein the polymerization is carried out by heating and takes place at a temperature of between 70°C and 160°C.

**14. (original)** A process according to claim 11 wherein the hydroxylamine, the nitron or the alkyl N-oxid having a molecular weight of more than 250 g/mol is present in an amount of 0.001 to 10 mol % based on the monomer or monomers.

**15. (original)** A process according to claim 11 wherein the weight ratio between the radical polymerization initiator and the hydroxylamine, the nitron or the alkyl N-oxid having a molecular weight of more than 250 g/mol is from 1:5 to 5:1.

**16. (currently amended)** A polymer or copolymer obtained~~able~~ by a process according to claim 11.

**17. (canceled)**